

FinEst Centre
for Smart Cities

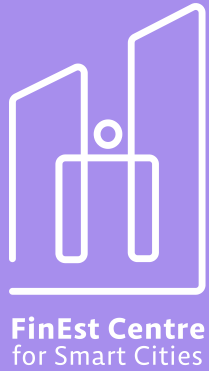
Experimenting & Piloting in Smart Cities

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Forum Virium Helsinki



Funded by
the European Union

This project is funded by two grants: the European Union's Horizon 2020 Research and Innovation Programme, under the grant agreement No. 856602, and the European Regional Development Fund, co-funded by the Estonian Ministry of Education and Research, under grant agreement No 2014-2020.4.01.20-0289.



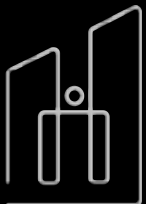
Prototypes, Pilots, Demo's & MVP's

2. Prototypes, Pilots, Demo's & MVP's

- Role of prototypes in general Innovation Process
 - Alpha's, Beta's, PoC's, DoD's, Demo's, MVP's, MLP's, Process Pilots, Product & Service Pilots
- Prototyping and Piloting as processes
- Objectives of Prototyping & Piloting
 - Critical Problems vs. Critical Functions

Exercise

- **Create a Pilot Road-map**



20+ years
5,127 prototypes
5,126 misses





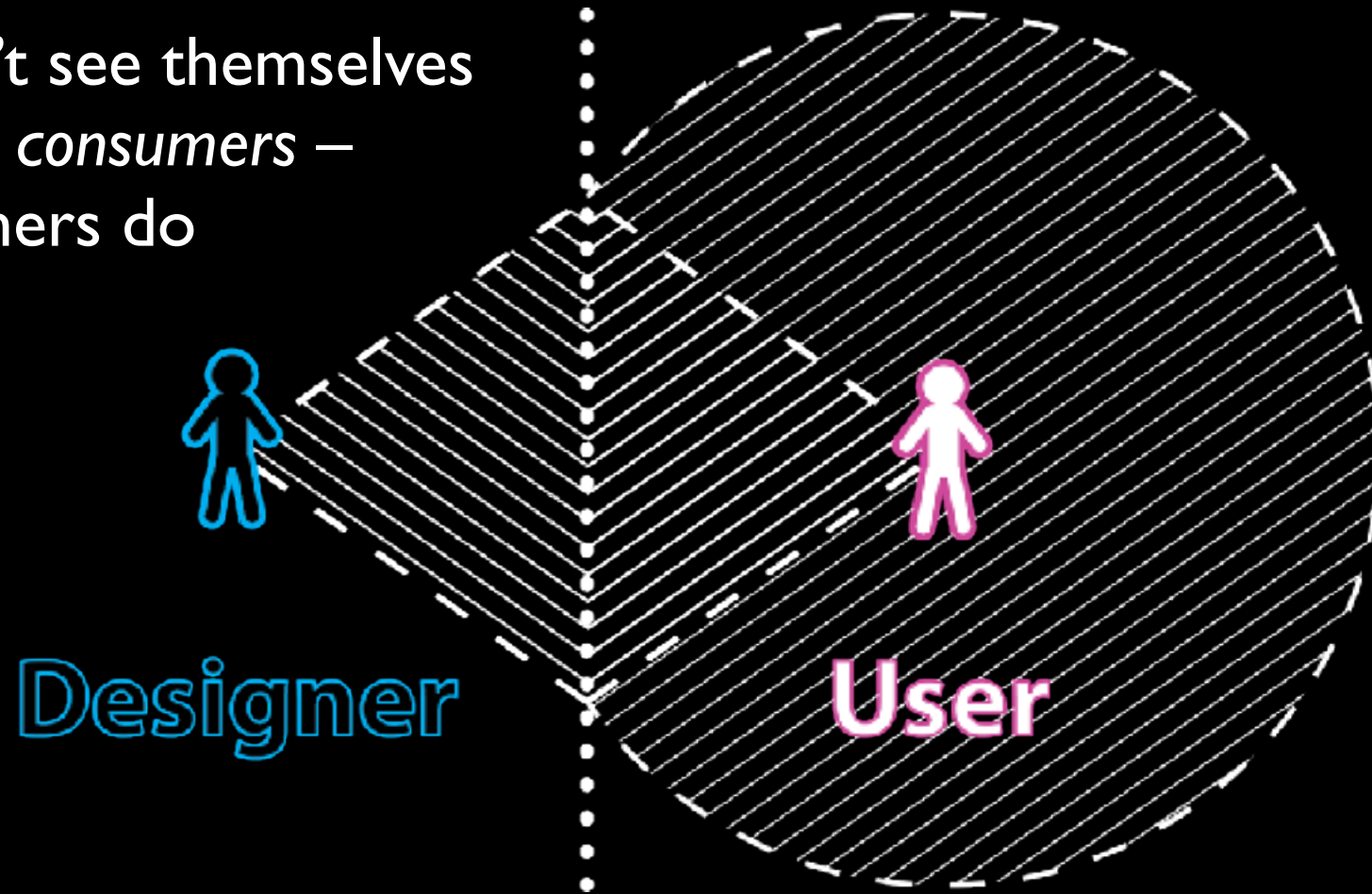
Thomas Edison:

*"I did not fail 10,000 times,
I just discovered 10,000 ways that do not work"*

Two perspectives

Product features vs. Product use

Users don't see themselves as *users* or *consumers* — only designers do



Prototype

Shared Model for

- Communicating
- Testing
- Understanding

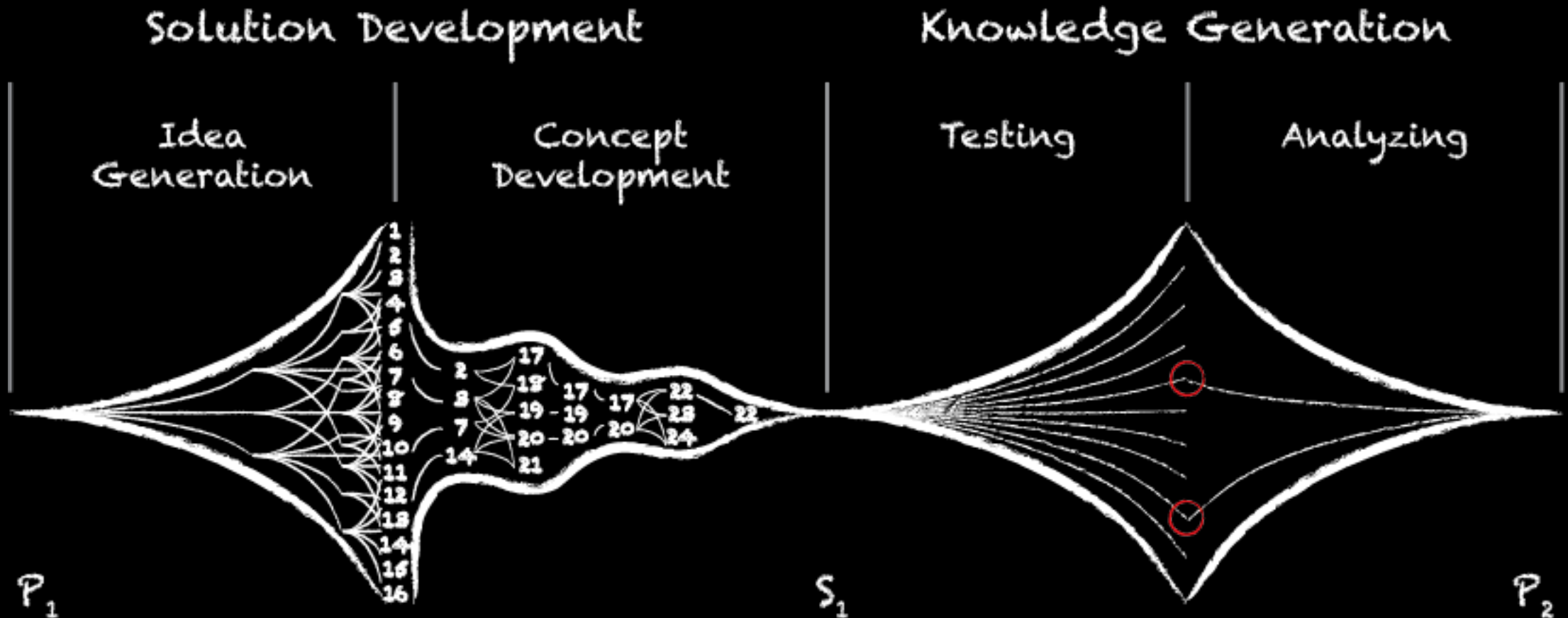
Pilot

Deliberate **Process** for

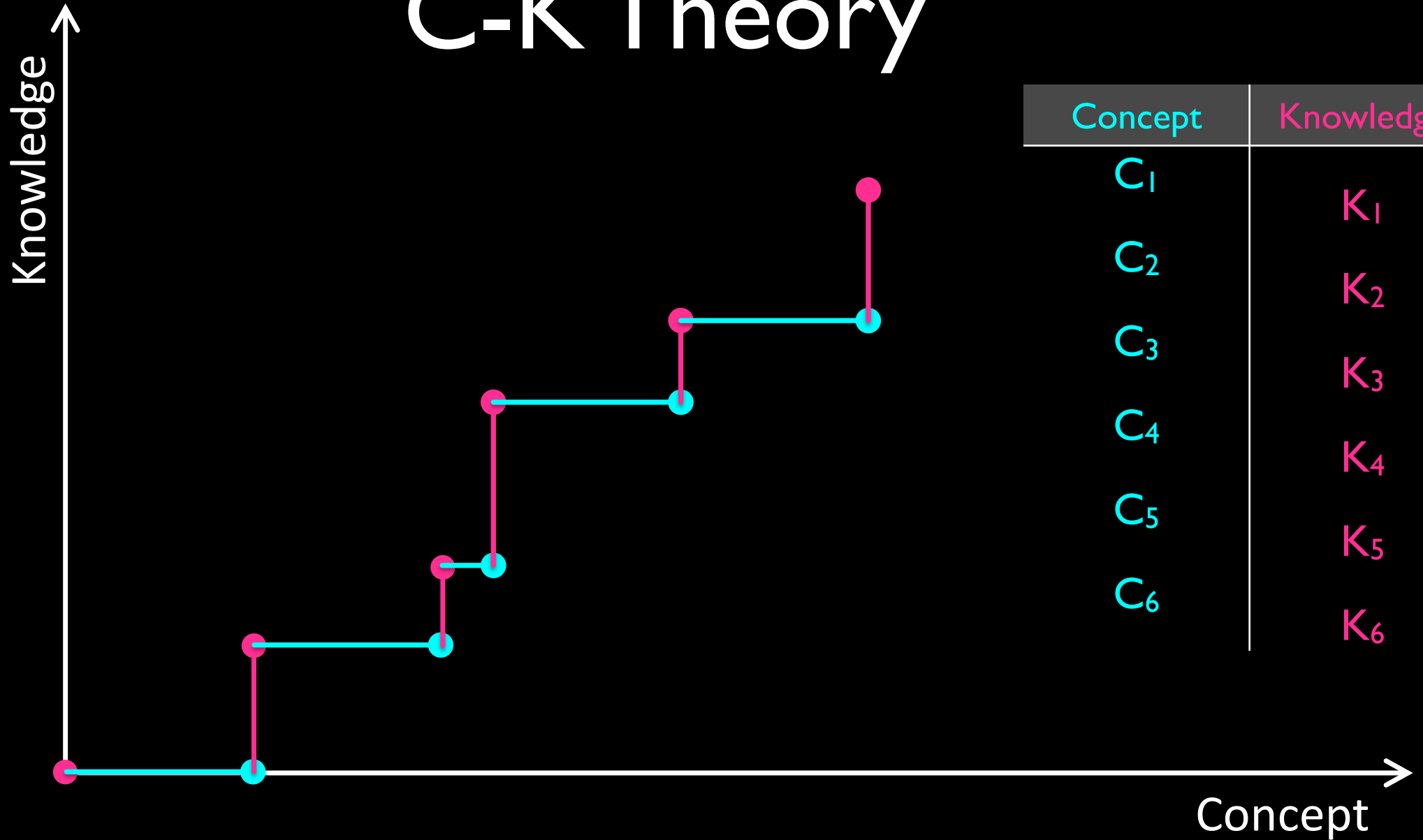
- Demonstrating
- Testing
- Validating
- Understanding

Real Innovation Process

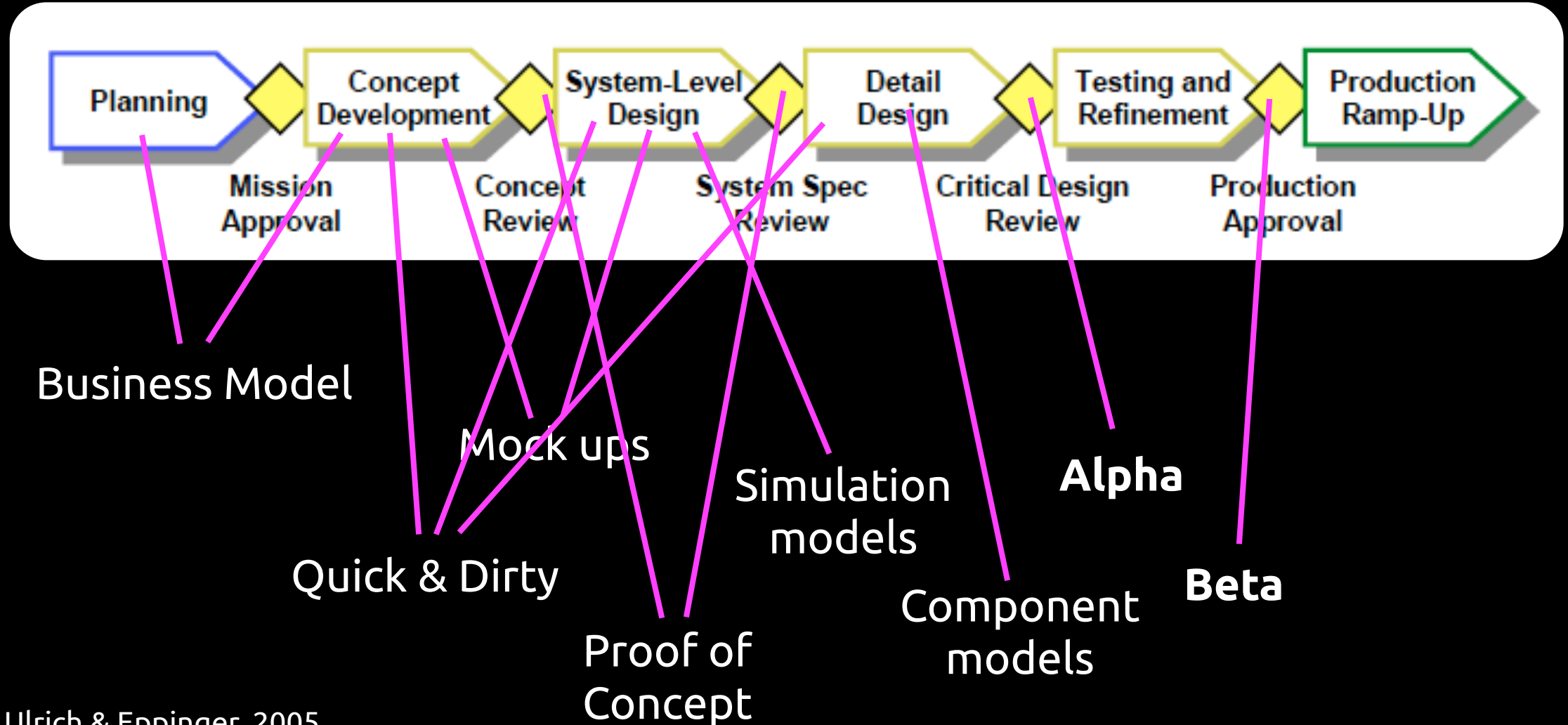
Iterative process in design, which relies on a combination of creative and analytical skills



C-K Theory



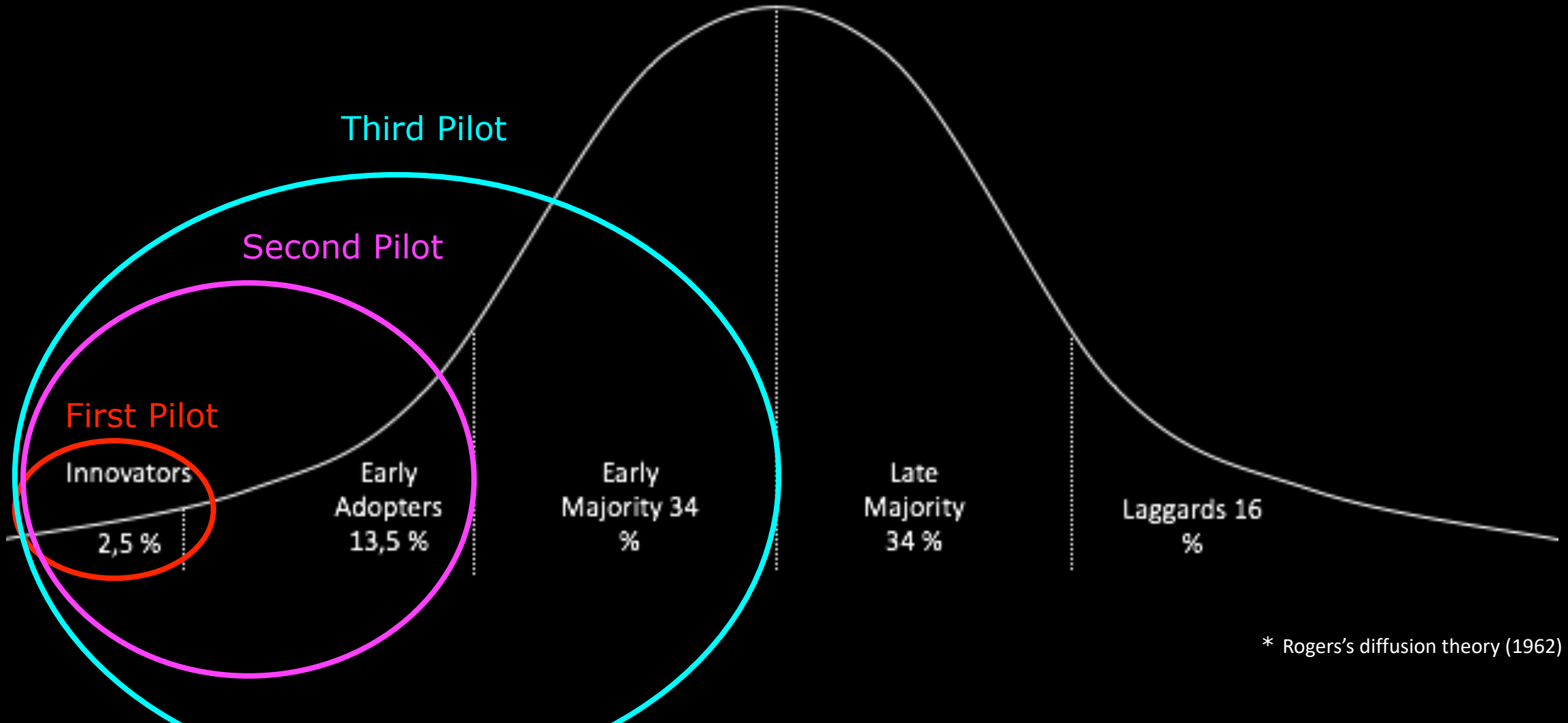
Linear Innovation Process



* Ulrich & Eppinger, 2005

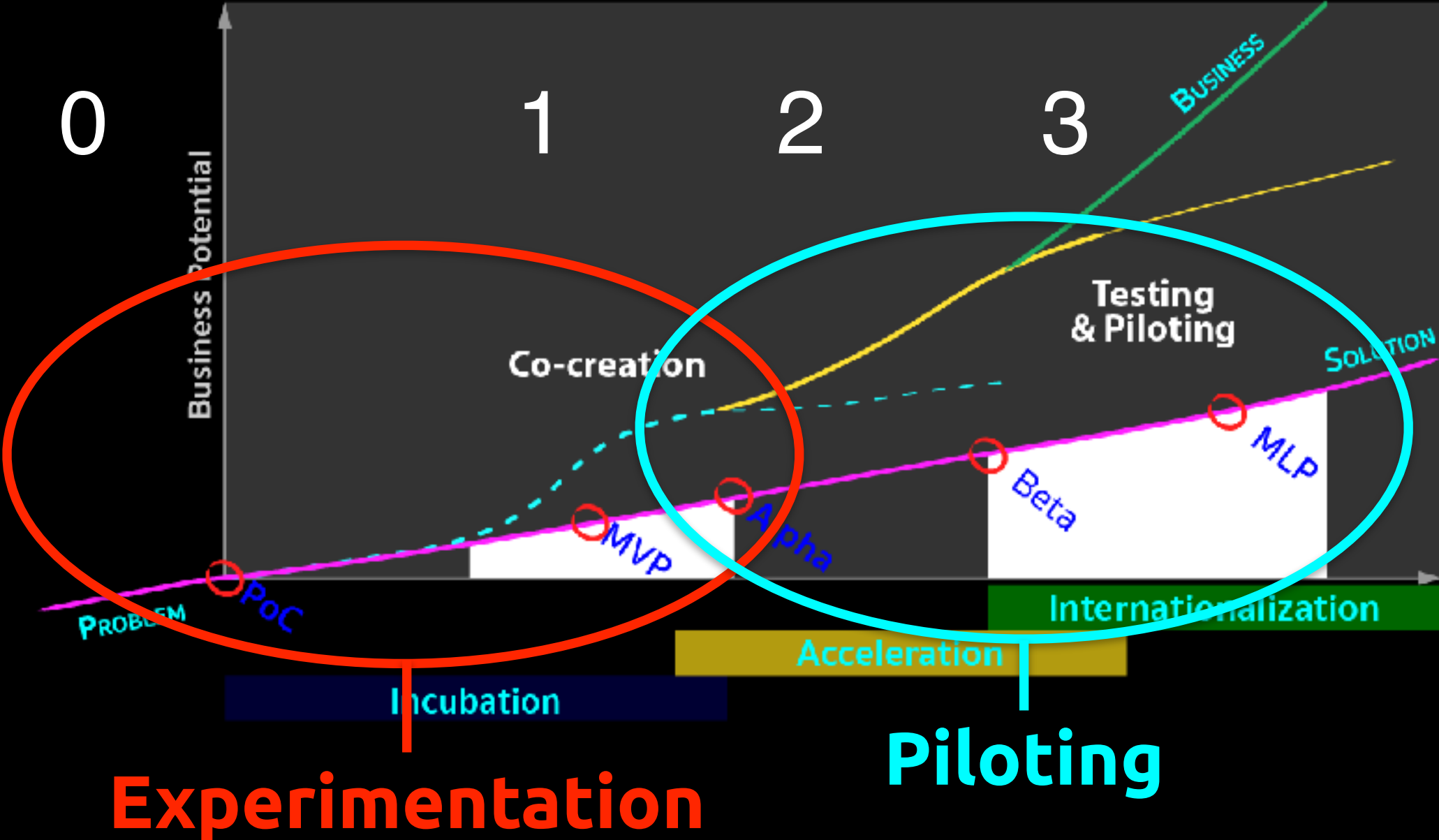
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Diffusion of Innovation

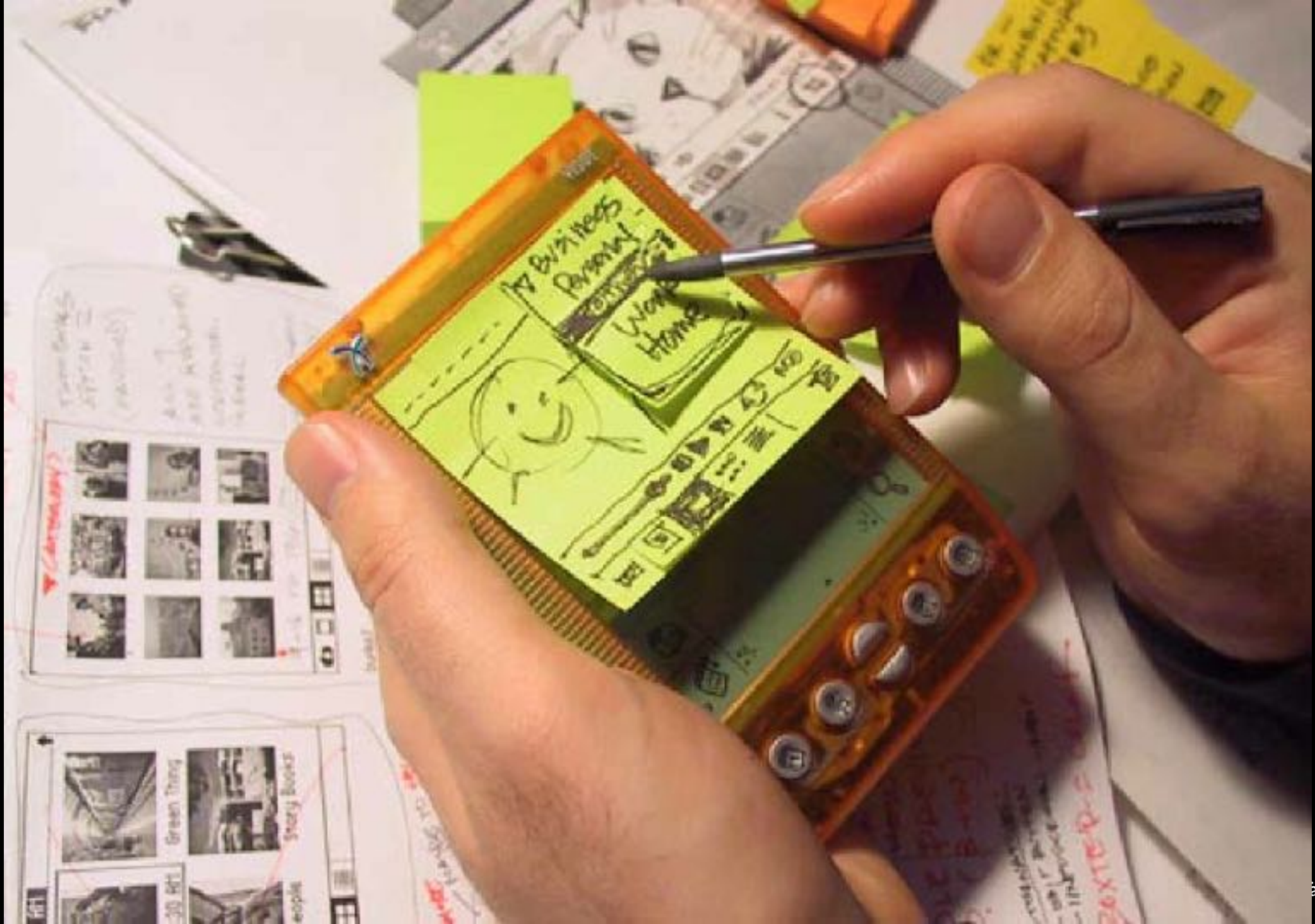


* Rogers's diffusion theory (1962)

Start-up Journey





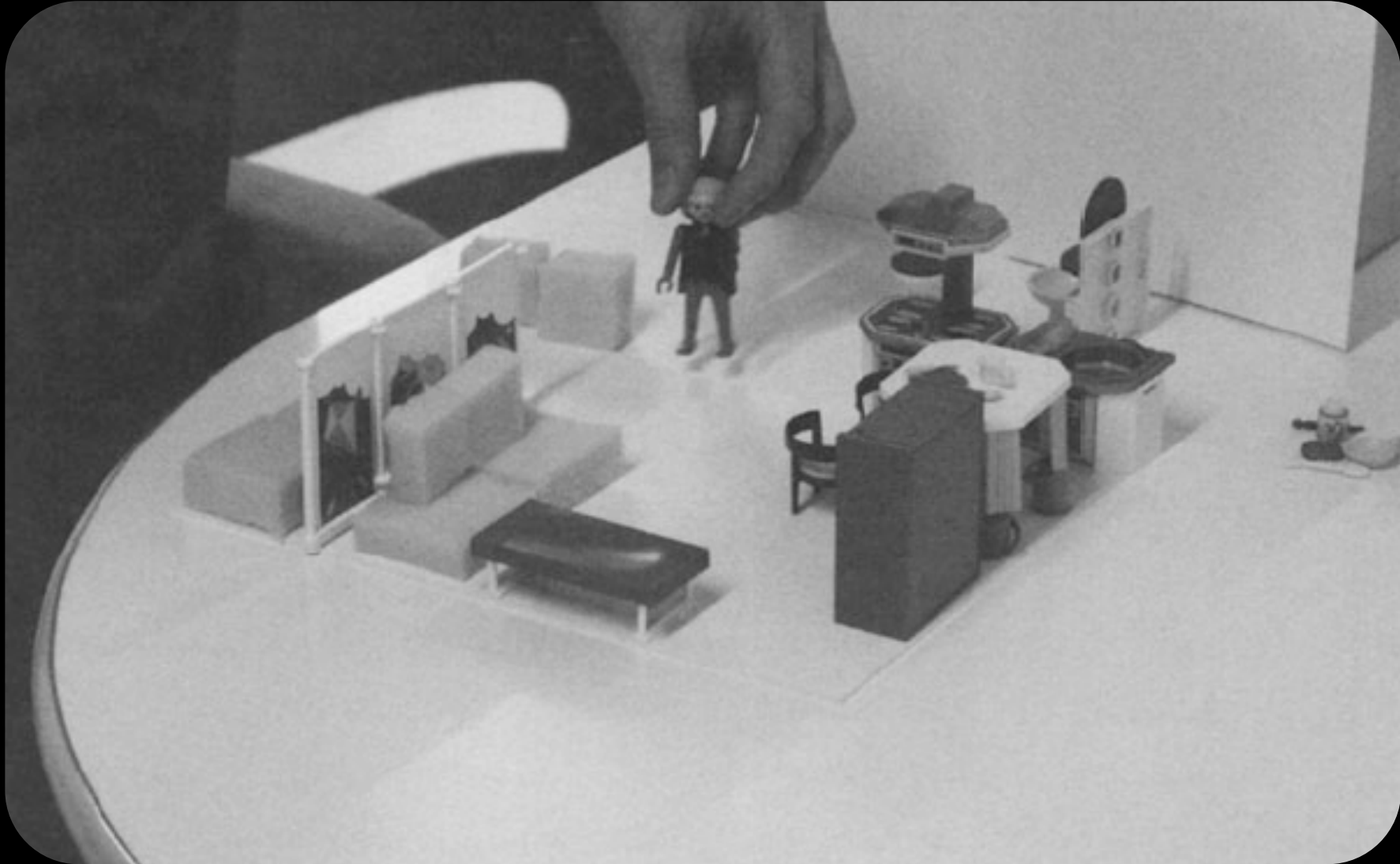


Proof of Concept

- Proof of Concept (PoC) or Critical Function
- Goal is to demonstrate the feasibility of the concept – Demo or Die



Proof of Concept



Wizard of Oz

- People operate or act functions of product
- Simulate, demonstrate and test
- Works-like Protos



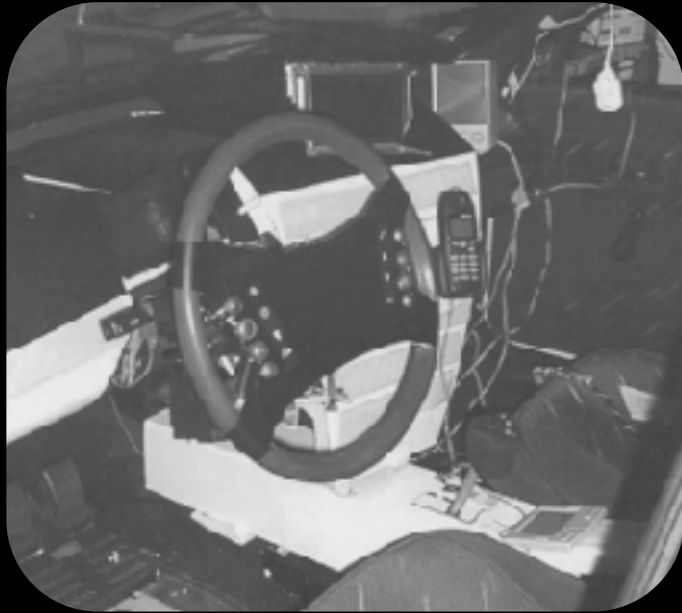
Alpha Proto

- All functions and form of actual product
- Manufacturing methods may be different from final product

Beta Proto

- “First batch” from production line
- Sent to selected customers for market test

Testing



Functional Testing



Usability Testing

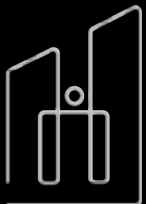


Market Testing

Objectives of Piloting

Learning and Proving

- **Identify** problems related to the solution
- **Validate** the feasibility of the solution
- **Understand** how people will use the solution
- **Demonstrate** the effectiveness of the solution
- **Learn** from experience

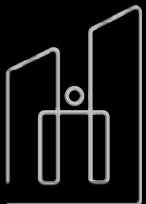


Critical Problem & Critical Function

- **Critical Problem** is something that must be resolved in order to satisfy a need
 - You must prove that there is a problem
- **Critical Function** is something that will make a difference in how a product/service performs
- **Critical Solution** is something that has the ability to solve the critical problem

Exercise

- **Create a Pilot Road-map**



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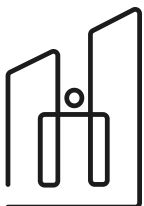


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